



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/813,573

03/31/2004

Georges R. Harik

0026-0074

4332

44989

7590

07/09/2008

HARRITY SNYDER, LLP  
11350 Random Hills Road  
SUITE 600  
FAIRFAX, VA 22030

EXAMINER

BETT, JACOB F

ART UNIT

PAPER NUMBER

2164

NOTIFICATION DATE

DELIVERY MODE

07/09/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

email@harritysnnyder.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,573	<b>Applicant(s)</b> HARIK ET AL.	
	<b>Examiner</b> Jacob F. Betit	<b>Art Unit</b> 2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on 28 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12-15 and 17-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12-15 and 17-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/30/07</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Remarks*

1. In response to communications filed on 28 March 2008, claims 1-10, 12-15, and 17-28 are presently pending in the application.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-6, and 9,10, 12-15, 17-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 2005/0198070 (Lowry) in view of "Context Query in Information Retrieval," known hereafter as Chi and US 5444823, known hereafter as Nguyen.

3. *As per Claim 1:*

1. A method comprising:

Identifying an implicitly defined semantic structure in a document, *Lowry* Para 187.

where a plurality of rules are associated with the implicitly defined semantic structure  
*Lowry*, Para 189 (teaching calculating a term proximity), Para 233 (teaching limiting proximity  
to the bounds of the implicit structure);

Determining a location of a first term and a location of a second term within the  
implicitly defined semantic structure; *Lowry*, Para 333

Outputting the distance value to rank the document for relevancy to a search query that includes the first term and the second term. *Lowry*, Para 189.

Lowery teaches a systems which located implicit and explicit semantic structures in a documents, and then uses term proximity to rank the pages, however it limits the proximity determination to within the identified structure. *Lowry*, Paras 187, 189, and 233. However, Lowry does not disclose using a expert system to determine the proximity. Yet, Lowery does teach that there are a number of factors that define different levels of proximity. *Lowry* Paras 9-14 (teaching same sentence, paragraph, and within a designated word limit.) Chi also teaches a number of rules that can aid in determining how closely related two terms are based on the provided semantic structure, and that should impact the rank. *Chi*, Section 4. Nguyen teaches building an expert system to implement a set of rules having deferent weights:

The most common line of reasoning used by an expert system involves the chaining, either forward, backward or a flexible mix thereof, of IF-THEN rules. However, as knowledge of the domain for a particular problem is almost always incomplete and, has, therefore, a degree of uncertainty in the solution thereof, a rule may have associated therewith, a confidence factor ("CF") or weight.(col 1 lines 30-40)

Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to Create an expert system that applied a set of rules to each implicit structure, as proximity should be separated by structure (Lowery), to provide a distance measure based on the location of the terms in the structure to rank the documents, as it would provide a system that more accurately ranked documents based on known inferences that can be drawn about claim relationships without human intervention.

*As per Claim 2*, Chi teaches the limitations as follows:

Art Unit: 2164

2. The method of claim 1, wherein the document is a HTML (Hyper-  
Text Markup Language) document. {Chi Section 4 para 1}

*As per Claim 3*, Chi teaches the limitations as follows:

3. The method of claim 2, wherein the implicitly defined semantic  
structures include lists created with HTML tags {Chi Rule 6}.

*As per Claim 4*, Chi teaches the limitations as follows:

4. The method of claim 3, wherein the HTML tags include paragraph  
tags, new line tags, bold tags, or table tags {Chi Rule 6}.

*As per Claim 5*, Chi teaches the limitations as follows:

5. The method of claim 1, further comprising:  
locating explicitly defined semantic structures. {Chi Rule 5}

*As per Claim 6*, Chi teaches the limitations as follows:

6. The method of claim 1, wherein the semantic structures include  
lists. {Chi Rule 5, Rule 6}

*As per Claim 9*, Chi teaches the limitations as follows:

9. The method of claim 1, wherein the implicitly defined semantic  
structures include titles or headings(Rule 2, Rule 4, Rule 6).

*As per Claim 10*, Chi teaches the limitations as follows:

See Claim 1 rejection.

*As per Claim 12*, Chi teaches the limitations as follows:

See Claim 10 rejection.

*As per Claim 13*, Chi teaches the limitations as follows:

See Claim 6 rejection.

*As per Claim 14*, Chi teaches the limitations as follows:

See Claim 6 rejection.

*As per Claim 15*, Chi teaches the limitations as follows:

The method of claim 13, wherein determining the semantically based distance values further includes:

assigning a distance value indicative of closeness when two terms are present in a same item of the list. {Rule 5, Rule6 }

*As per Claim 17*, Chi teaches the limitations as follows:

17. The method of claim 16, wherein the implicitly defined semantic structures are located prior to the ranking. {Section 5.1 3<sup>rd</sup> para} As the rules are used in determining the ranking it is inherent that the structures are located prior to ranking the documents.

*As per Claim 18*, Chi teaches the limitations as follows:

See Claim 2 rejection.

*As per Claim 19*, Chi teaches the limitations as follows:

See Claim 3 rejection.

*As per Claim 20*, Chi teaches the limitations as follows:

See Claim 4 rejection.

*As per Claim 21*, Chi teaches the limitations as follows:

See Claim 9 rejection.

*As per Claim 22*, Chi teaches the limitations as follows:

See Claim 12 rejection.

*As per Claim 23*, Chi teaches the limitations as follows:

See Claim 1 rejection.

*As per Claim 24*, Chi teaches the limitations as follows:

24. The device of claim 24, wherein the processor further:

receives a search query that contains the terms.{Section 1 para 3}

*As per Claim 25*, Chi teaches the limitations as follows:

25. A method comprising:

receiving a search query; {Section 1 para 3}

presenting the documents in an order influenced by the ranking. {Section 5.1 paras

2 and 3} The rest of the limitation are taught in the claim 1 rejection above.

*As per Claim 26*, Chi teaches the limitations as follows:

See Claim 2 rejection.

*As per Claim 27*, Chi teaches the limitations as follows:

See Claim 3 rejection.

*As per Claim 28*, Chi teaches the limitations as follows:

See Claim 5 rejection.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over 2005/0198070 (Lowry) in view of “Context Query in Information Retrieval,” known hereafter as Chi and US 5444823, known hereafter as Nguyen, in view of applicants admitted prior art.

Claim 7 teaches the determination of proximity of search terms, but fails to expressly disclose the method for calculating the proximity. However the applicant admits this method is known is para 5 of the specification “Closeness of terms in this context may be measured simply by counting the number of words in the document occurring between the search terms.”. Thus it would have been obvious to one of ordinary skill in the art to use this method to calculate the proximity, as it was known function in the art for determining proximity.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over 2005/0198070 (Lowry) in view of “Context Query in Information Retrieval,” known hereafter as Chi and US 5444823, known hereafter as Nguyen, in view of “Automatic Discovery of Semantic Structures in HTML Documents,” known hereafter as Mukherjee.

Chi Teaches the claims upon which claim 8 is dependant, but fails to expressly disclose “locating repeating occurrences of a set of two or more text formatting commands.” However this feature is taught by Makherjee in the section labeled our approach. Thus, it would have been obvious to one of ordinary skill in the art to use the teachings of Makherjee in the invention as it would locate contexts that would not have been found in the system of Chi and thus make the results more accurate.

### ***Response to Arguments***

4. Applicant's arguments filed 28 March 2008 have been fully considered but they are not persuasive.

In response to the applicant's arguments that the combination of Lowry, Chi et al., and Nguyen do not disclose "selecting one of a plurality of rules based on a relationship of locations of first and second terms within a implicitly defined semantic structure, and determining a distance value between the first and second terms using the selected rule", the arguments have been considered, but are not deemed persuasive.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

While Lowry does not distinctly disclose selecting the rules as stated Lowry does disclose different proximity types (within the same sentence, paragraph, or within a designated word limit) and discusses different effectiveness involved with different types. Lowry also discloses trying to break down semantic structures to more effectively improve the search. Chi discloses using rules that can aid in determining how closely related terms are based on semantic structure. Nguyen teaches building a search system using expert rules these rules allow for flexibility in confidence factors. For instance a rule can be made that if words are found close to each other within the same paragraph there is less confidence than if they words are found close to each other in the same sentence.

### ***Conclusion***

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jacob F. Betit whose telephone number is (571)272-4075. The examiner can normally be reached on Monday through Friday 10:30 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

jfb  
30 Jun 2008

/Charles Rones/  
Supervisory Patent Examiner, Art Unit 2164